REDA A.I. ABOU-SHANAB
RESEARCH PROFESSOR

PERSONAL INFORMATION	Full Name: Affiliations: Address: Mobile No.: E-mail: Important links:	Reda Abd elaziz Ibrahim Abou-Shanab Genetic Engineering & Biotechnology Research Institute, Environmental Biotechnology Dept. City of Scientific Research, 21934 Ne Borg El Arab City, Alexandria, Egypt 01228963380 raboushanab@gmail.com; rabousha@umn.edu https://www.scopus.com/authid/detail.uri?authorId=9338041400 https://experts.umn.edu/en/persons/reda-aboushanab/publications/ https://scholar.google.com/citations?user=gfhLWsAAAAAJ&hl=en https://www.linkedin.com/in/reda-aboushanab-5a8284140/
EDUCATION	**Doctor of Philosophy in Botany-Microbiology (Molecular Microbial Ecology), 2003** **Alexandria University**, Faculty of Science, **Egypt**, C/O **Maryland University**, College of Agriculture and Natural Resources, College Park, **USA**, **Master of Science in Botany- Microbiology (Microbial Ecology), 1996 Cairo University**, Faculty of Science, **Egypt**, C/O **Minnesota University**, St Paul, Dept. of Soil, Water, and Climate, Microbial Ecology program, **USA**. **Bachelor of Science (Botany) distinction with honor, May, 1990.** **Zagazig University**, Benha Branch, Faculty of Science, **Egypt**	

ACTIVITIES	Jul. 2013- Present	**Professor** of Environmental Biotechnology, Genetic Engineering & Biotechnology Research Institute (GEBRI), **City of Scientific Research & Technology Applications (SRTA-City),** New Borg El Arab City, 21934, Egypt**.**
	Jun 2017- June 2021	**Research Professor,** Biotechnology Institute, College of Biological Sciences, University of Minnesota Twin Cities, St. Paul MN, 55108 **USA**.
	April 2017-Jun 2017	**Professor,** GEBRI, **SRTA-City,** Egypt
	Sept. 2015-April 2017	**Postdoctoral Research Associate,** Biotechnology Institute, College of Biological Sciences, University of Minnesota Twin cities, St. Paul MN, 55108 **USA**.
	April 2015- Sept. 2015	**Professor,** GEBRI, **SRTA-City,** Egypt
	Nov., 2014-Mar.2015	**Postdoctoral Research Associate,** Bioconversion Lab., College of Engineering, University of Georgia, Athens GA, **USA**.
	Aug. 2013-Aug. 2016	**Professor, Vice Dean of** GEBRI, **SRTA-City, Egypt**
	Jul. 2013- Present	**Professor** of Environmental Biotechnology, **SRTA-City,** GEBRI, **Egypt.**
	Jun. 2008- Jul 2013	**Research Associate Professor,** Dept., of Environmental Biotechnology, GEBRI, **SRTA-City, Egypt.**
	Jan.2012- Aug. 2016	**Head of Scientific Publications Office (SPO), SRTA-City**.
	Sep. 2007- Aug. 2016	**Executive Director of Quality Unit,** Central laboratory for Scientific Services &Environmental Assessment**, SRTA-City.**
	Sep. 07-Jun, 2013	**SRTA-City, Head of the Committee of Environmental affairs & Community Service**
	July 01- Dec., 2012	**Research Professor**, Dept. of Environmental Engineering. **Yonsei University,** Graduate School of health and Environment, **S. Korea**.
	Sep. 2010-Oct. 2010	**Visiting Professor,** United State Department of Agriculture (USDA), Beltsville MD, **USA.**
	Mar.2009- Mar.2010	**Post-Doctoral Research Fellow,** Dept. of Environmental Engineering. **Yonsei University,** Graduate School of health and Environment, **S. Korea**.
	April 2003-June 2008	**Research Assistance Professor,** Environmental Biotechnology Department, Mubarak City for Scientific Research & Technology Applications **(MUCSAT), GEBRI, Egypt**
	April, 05-Aug.05	**Postdoctoral Research Associate,** College of Agriculture and Natural Resources, **Maryland University, College Park, USA.**

Sep. 2002- April 2003	**Research Assistant,** Environmental Biotechnology Dept., (GEBRI), **MUCSA, Egypt**
Jun 2001- January 2002	**Faculty Research Assistant**, Department of Cell Biology and Molecular Genetics, **Maryland University, College Park, USA**
Aug. 2000 – Sep. 2002	**Faculty Research Assistant**, University of Maryland, College of Agriculture and Natural Resources, **Maryland University, USA**
2000-Sept., 2002	**Research visitor** Environmental Chemistry Lab, **USDA, Beltsville MD, USA.**
2000-Sept., 2002	**Research visitor,** Soybean Genomic and Improvement Lab. **USDA, Beltsville MD, USA**
1998 – Aug. 2000	**Research Assistant,** Environmental Biotechnology Dept**., MUCSAT, GEBRI, Egypt.**
1996 - 1998	**Research Assistant**, Botany and soil Microbiology Dept. **National Research Center (NRC), Cairo, Egypt**
1995 - 1996	**Assistant Researcher,** Botany and soil Microbiology Dept. **NRC), Cairo, Egypt**
1994 – June, 95	**Pre-Doctoral Assistant, Soil, water and Climate Dept.,** Microbial Ecology Lab., **Minnesota University, St. Paul, USA.**
1991 -1994	**Assistant Researcher**, Botany and Soil Microbiology Dept. **NRC, Egypt.**
1990-1991	Master student, Scholarship for Master study **Cairo University, Faculty of Science, Egypt**

PROFESSIONAL SERVICE

Editorial Board team for International Journals

1- Resources and Environment
2- Science HuB-Leading the Information Highway "Publisher"
   2-1- Agriculture and Biology Journal of North America (ABJNA)
   2-2- American Journal of Biotechnology and Molecular Sciences (AJBMS)
   2-3- American Journal of Medical and Dental Sciences (AJMDS)
   2-4- American Journal of Food Nutrition (AJFN)
   2-5- American Journal of Scientific and Industrial Research (AJSIR)
3- International Research J. of Biotechnology
4- International J of Biotechnology and molecular biology Research
5- Research Journal of Biological Sciences
6- Journal of Evolutionary Biology Research

- **Reviewer for Journals:**
  1- Progression Energy and Combustion Science
  2- Biomass and Bioenergy
  3- American Chemical Society (ACS) Journals
  4- Chemosphere
  5- Journal of Hazardous Materials
  6- Bioresource Technology
  7- Ecotoxicology and Environmental safety
  8- Renewable Energy
  9- Journal of Genetic Engineering and Biotechnology
  10- Environmental Science and Pollution Research
  11- World J. Microbiology and Biotechnology
  12- Current Microbiology
  13- Int. J. Phytoremediation
  14- Journal of Environmental Sciences
  15- European J. of Soil Biology
  16- Critical Reviews in Biotechnology
  17- Applied soil Ecology
  18- African Journal of Environmental Science and Technology
  19- Chemistry and Ecology
  20- Science of the Total Environment
  21- African J. of Biotechnology
  22- Environmental Monitoring and Assessment
  23- European Journal of Soil Biology
  24- Journal of Environmental Management
  25- African J. of Microbiology
  26- Water, Air, & Soil Pollution
  27- Agriculture and Biology J. of North America
  28- Journal of Advanced Research
  29- Others
- **Reviewer for Book Chapter**
  Biomanagement of Metal Contaminated Soils", Book, M.D. Khan (Ed.)**,** SpringerVerlag, The Netherlands.

- **Referee for International and local Projects for the following organizations:**

  1- FWF, Der Wissenschaftsfonds, Executive Board of the Austrian Science Fund **"project titled Bacteria and heavy metal accumulation in plants)**
  2- Arab Science and Technology Foundation "**Judges of El-Baz Competition for Arab Capacities for development and innovation**"
  3- Misr El Kaier foundation, (MEK), Egypt "**Peer-reviewing panel for the proposals submitted to MEK**".
  4- Euro-Mediteranean cooperation on **research and training in Sun Based Renewable Energies** (Eurosunmed)
  5- Princes Nourah Bint Abdelrahman University, Ministry of Higher Education, Kingdom of Saudi Arabia,
  6- Ministry of Scientific Research, Egypt "**Peer-reviewing panel for the proposals submitted MSR on renewable energy**".

- **Membership of professional bodies/learned societies**
  1- American Society for Microbiology
  2- Egyptian Society of Biochemistry and Molecular Biology, Cairo, Egypt
  3- International Organization for Biotechnology and Bio-engineering (IOBB)
  4- Egyptian Society of Applied Microbiology, Egypt.
  5- Egyptian Society of Experimental Biology, Egypt.
  6- National Committee for Biological Sciences, Academy of Scientific Research and Technology, Egypt
  7- Borg El Arab Society of Environmental Protection, Egypt.
  8- International serpentine ecology society, USA.
  9- Biofuel production team, Academy of Scientific Research & Technology, Egypt.

TECHNOLOGY TRANSFER

1. Byong-Hun Jeon, Jae-Hoon Hwang, **Reda Abou-Shanab**, Young Hun Kim, Jaeyoung Choi, Youngjae Kim, Chansup Choi, John Yang, Sehyeon Kim, Wastewater treatment apparatus and system using bio filter, Korea Patent Registration Number 10-1142865, transferred to Global Leader Biotech Co.

2. Byong-Hun Jeon, Booki Min, Hocheol Song, Jae-Hoon Hwang, Young Hun Kim, **Reda Abou-Shanab**, Multiple energy recovery and carbon control (MERCC) in wastewater treatment process, Korea Patent Registration Number 10-1102310, transferred to Global Leader Biotech Co.

Thesis under my supervision

Ph.D. Thesis:

1) **Abdu-El Kouliby**, Taz University, Yamen. Ph.D. student, "Plant microbial combinations to phytoremediate heavy metals in contaminated sites" Botany Dept., Faculty of Science, Alexandria, University (done January, **2007).**
2) **Hana Zaiyed**, **Libya**, PhD student, "The impact of sub-lethal concentrations of different pesticides on the fecundity and infectivity of some snail vectors of common endemic diseases" Zoology Dept., Faculty of science, Alexandria University **(**done January, **2011).**
3) **Hala Hassan**, PhD student, "Molecular characterization of non-symbiotic nitrogen fixers isolated from rhizosphere of wheat grown under harsh conditions" Faculty of Agriculture, Alexandria University (done in March, **2012**).
4) **Ibrahim Khader, (2011), " Role of some N2 fixing microorganisms on wheat productivity under salt stress"** Botany Dept., Faculty of Science, Tanta University (done)
5) **Rehab Yassen**, PhD student, (**2011**) "Characterization of microalgal species as a potential use for biocontrol of plant pathogens and biodiesel production" Faculty of Agriculture, Alexandria University (done 2015).
6) **Amera Ibrahim**, (**2011**), "Genetic mining for detoxification genes in bacteria" Faculty of Agriculture, Alexandria University (done, 2015).
7) **Basma M.M. Omar (2013),** Environmental Science, Faculty of Science, Damietta University (done, 2018)

M.Sc. Thesis:

1) **Eman Samy**, 2004 "Molecular characterization of bacteria isolated from legumes grown under stress conditions" Faculty of Science, Alexandria, University (**done, March, 2008**).
2) **Marwa Abd El Kader** (**2010**), Botany Dept., Faculty of Science, Tanta University**, done, 2012**
3) **Marwa Hassan Ali Hassan,** (**2012**), "Screening and molecular characterization of microorganisms capable of producing bioflocuculants for wastewater treatment" Biochemistry Dept., Faculty of Science, Alexandria University, done, 2014

4) **Mohamed Erakky** (**2011**), "Molecular characterization of petroleum compounds degrading bacteria isolated from petroleum contaminated soil" Biochemistry Dept., Faculty of Science, Ain Shams University, done, 2017
5) **Mahmoud Moubarak**, **(2012)**, Botany Dept., Faculty of Science, Alexandria University, done 2019
6) **Taher Attiya Mohamed, (2012**), "Wastewater treatment using microorganisms resistant to heavy metal and isolated from tannery effluent" Inorganic Chemistry Dept., Faculty of Science, Ain Shams University, done March 2017
7) **Soha Mohamed (2014).** Botany Dept., Faculty of Science, Alexandria University, done Dec., 2017

L) <u>Thesis Defense committee member</u>

1- Hala Hassan El Badri, 2012, Ph.D. "Molecular characterization of non-symbiotic nitrogen fixers isolated from rhizosphere of wheat grown under harsh conditions" Faculty of Agriculture, **Alexandria University**

2-Marwa Mohamed Abd El Kader, 2013, MSc. "Molecular and physiological studies of algae grown on wastewater as a valuable candidates for biodiesel production" Botany Dept. Faculty of Science **Tanta University**

3-Marwa Hassan Ali Hassan, 2014, MSc. "Screening and molecular characterization of microorganisms capable of producing bioflocuculants for wastewater treatment" Faculty of Science, B**iochemistry** Dept. **Alexandria University**

4-Radwa Mohamed Mounes Hassan, 2015, MSc. "Hydrogen production by the conversion of biodegradable organic wastes" Faculty of Science, Botany and Microbiology Dept. **Alexandria University**

5- Hind Mohamed Mohamed Hassan, 2015, MSc. "Phosphate solubilizing bacteria and their application as biofertilizers" Faculty of Science, Botany and Microbiology Dept. **Alexandria University**

6- **Mohamed Eraky** (**2015**), "Molecular characterization of petroleum compounds degrading bacteria isolated from petroleum contaminated soil" Biochemistry Dept., Faculty of Science, **Ain Shams University**, done

7-**Hanan Medhat Abdelrazeek (2015).** Isolation and characterization of phosphate solubilizing actinobcateria" faculty of science, **Alexandria University**.

<u>Teaching experience and activities</u>

- Biol 1806, Biology saves the world (BSW), University of Minnesota, College of Biological Sciences spring 2016, 2017, and 2018.

- Biol 3700 (senior seminar topics course), "Bioremediation: New approaches and trends" University of Minnesota, College of Biological Sciences, spring 2020.

INVITED PRESENTATION

- **Abou-Shanab, R.A.I**. (**2015**). Algae biofuel potential use as sustainable alternative green energy. Utilization of algae for the production of biodiesel and nutraceuticals workshop, National Research Center 18 May 2015, Cairo, Egypt
- Abou-Shanab, R.A.I. (**2014**). Green Renewable Energy for Socio-Economic Development, Industry Academia Collaboration, IAC2014, Egypt.
- **Abou-Shanab, R.A.I. (2010).** Bioremediation New Approaches and Trends. Faculty of Science, Benha University, Sept., **Egypt**.
- **Abou-Shanab, R.A.I. (2010).** Phytoremediation using plants and Microorganisms to Clean up our mess. The France-Egypt year of science and Technology workshop, 3-4, **Egypt**.
- **Abou-Shanab, R.A.I. (2010).** Quality and Environmental Management, Mubarak city for scientific research and technology applications, Egypt, 4-5 August.
- **Abou-Shanab, R. (2009).** Phytoremediation: Using plants and microorganisms to clean up our mess, Korea Institute of Geoscience and Mineral Resources (KIGAM), **S. Korea**, July
- **Abou-Shanab, R. (2009).** Phytoremediation new approaches and trends, Korean Institute for science and Technology (KIST), **South Korea**, 18 June
- **Abou-Shanab, R.A.I. (2008).** Phytoremediation: Using plant and microorganisms to clean up our mess "Workshop for Biotechnology", Assuit University and Mubarak City for Scientific Research, Assuit University, Egypt, May 8.
- **Abou-Shanab, R. (2007).** DNA Technology and Applications, Benha University, Faculty of Science, Qalybia, **Egypt**
- **Abou-Shanab, R. (2006).** Phytormediation Techhnology and Applications, Egyptian Society of Applied Microbiology, Agriculture Genetic Engineering Research Institute (AGERI), **Egypt**, May, 2006.
- **Abou-Shanab, R.A.I. (2003).** Lecture at workshop on Polymerase Chain Reaction (PCR) and gene sequence, Mubarak City for Scientific Research and Technology Applications, Borg El Arab, Alexandria, Egypt, Sept., 2003.
- **Abou-Shanab, R.A.I. (1995).** Lecture at workshop on use of Molecular Biology Techniques in Biological Nitrogen fixation research,

Agriculture Genetic Engineering Research Institute (AGERI, Egypt), June 18-22, **1995.**

PATENTS

1- Byong-Hun Jeon, **R.A.I. Abou-Shanab**, Jae-Hoon Hwang, Young Hun Kim, You Kwan Oh **(2012)**, *Chlamydomonas pitschmannii* YSL03[KCTC 11715BP], US Patent Number **PCT/KR2010/006561**

2- Su-Nam Kim, Jae-Young Choi, Byong-Hun Jeon, Jae-Hoon Hwang, Min-Kyu Ji, Ibrahim Abd Ei-Baky Mohamed Matter, **Reda A.I. Abou-Shanab (2010)**, Novel Strain of *Nitzschia cf. pusilla*, Korea Patent Number **10-2010-0093325** (**Pending**).

3- Byong-Hun Jeon, Jae-Hoon Hwang, **R.A.I. Abou-Shanab**, Young Hun Kim, Oh You Kwan **(2010).** Novel strain *Chlamydomonas pitschmannii* YSL03, Korea Patent Number **10-1114426.**

4- Byong-Hun Jeon, Jae-Hoon Hwang, **R.A.I. Abou-Shanab,** Kim Uounghun, Choi Jaeyoung, Kim Yongie, Choi Chansup, Yang John and Kim Sehyeon **(2010)** "Wastewater treatment apparatus and system using bio-filter", Korea Patent number **10-1142865.**

5- Byong-Hun Jeon, Booki Min, Hocheol Song, Jae-Hoon Hwang, Dong Hun Kim, **R.A.I. Abou-Shanab, (2009)** "Multiple energy recovery and carbon control (MERCC) in wastewater treatment process.", Korea Patent number **101102310.**

6- **Abou-Shanab, R.A. (2008).** Removal of Toxic Chromium (VI) Using *Aspergillus tamarii* Isolated From Egyptian Environment. Egyptian patent Office, Patent # **24010 (Issued).**

7- Jay Scott Angle, Rufus L. Chaney**, Reda Abdelaziz Abou-Shanab** and Peter Van Berkum **(2007).** Bacterial effects on metal accumulation by plants, US patent Office Patent # **7,214,516 (Issued).**

8- **Abou-Shanab, R. A**. **(2007)**. Method for heavy metal extraction from soil using *Conyza discoridies,* Egyptian patent Office Patent **#23678 (Issued).**

GRANTS & AWARDS	**GRANTS** 1) Michael Sadowsky, Cara Santelli, and **Reda Abou-Shanab**, Mn-DRIVE Project "Plant-Microbe Interactions to Phytoremediate Arsenic Contaminated Soil"2017-2019. 2) P.I. of project "Population Genetic Structure of Rhizobia that Nodulate Medicago Species Indigenous to Egypt: Potential as Inoculants for Use in Arid Regions, Reda Abou-Shanab, GEBRI, Environmental Biotechnology Dept., MuCSAT, New Borg El Arab City , Alexandria, Egypt Peter VanBerkum, USDA-ARS, Soybean Genomics & Improvement Laboratory, Beltsville, MD (US-EG program) running (**2007-2013**), **finished** 3) COPI of project "Biodiesel from Microalgae as Sustainable and Renewable Energy source. STDF, Egypt, **2013 -2015, finished** 4) Member in Global Research laboratory (GRL) project "Removal of volatile organic pollutants from water by hubrid sorbents and microbial degradation, Ministry of Education, Science and Technology, S. Korea, **2009-2010** (**finished**). 5) Member in 21st Frontier Research project, Development of small scale water treatment system for nitrate and arsenic treatment, Ministry of Education, Science and Technology, S. Korea **2009-2010** (**Finished**). 6) P.I. of running project "Construction of heat tolerant rhizobia for producing legumes under bio-farming systems in remote areas". Funded from Academy of Scientific Research &Technology. Genetic Engineering Program, Egypt, from **2004-2007** (**Finished**). 7) P.I. of project "Conservation of Egyptian Desert Truffles from extinction and increase truffle production areas in Matrouh Government, funded from Mubarak City for Scientific Research and Technological Application and Matrouh Government, Egypt, **2003** (**Finished**). 8) Co.P.I. of project. Phytoremediation: Plant based systems to decontaminate Egyptian soils. Funded by USA-Egypt Collaborative Fund. In Collaboration with Maryland University USA. **1999-2002** (**Finished**).
	Awards • **Reda A.I. Abou-Shanab (2016). Best speaker award,** Session "Environmental Pollution Using Modern Technology" in the 3rd international forum environmental pollution: Problem and solution, Tanta University 12-14 July 2016, Egypt. • **Reda A.I. Abou-Shanab (2015).** Achievement award, in recognition and appreciation of research contribution and great scientific achievement of

distinguished publications. City of Scientific Research & Technology Applications, Egypt

- **Reda A.I. Abou-Shanab (2014).** Achievement award, in recognition and appreciation of research contribution and great scientific achievement of distinguished publications. City of Scientific Research & Technology Applications, Egypt
- **Reda A.I. Abou-Shanab (2013).** Achievement award, in Accreditation of the central lab for Environmental Assessment and Scientific Services for ISO 17025 by EGAC. City of Scientific Research & Technology Applications, Egypt
- **Reda A.I. Abou-Shanab (2013).** Achievement award, in recognition and appreciation of research contribution and great scientific achievement of distinguished publications. City of Scientific Research & Technology Applications, Egypt
- **Reda A.I. Abou-Shanab (2012). Misr El Kahieir organization,** Misr ElKheir Publication Award, Egypt. http://misrelkheir.org/en/
- **Reda A.I. Abou-Shanab (2012).** Research Professor, The Graduate School of Health and Environment, Environmental Engineering Dept., Six months full funded from Brain pool program, S. Korea, KOFST.
- **Reda A.I. Abou-Shanab (2012).** Achievement award, in recognition and appreciation of research contribution and great scientific achievement of distinguished publications. City of Scientific Research & Technology Applications, Egypt.
- **Reda A.I. Abou-Shanab (2012).** Achievement award, in recognition and appreciation for great effort and contribution in scientific achievement of attaining a remarkable citation number and *h*-index. City of Scientific Research & Technology Applications, Egypt.
- **Reda A.I. Abou-Shanab (2011).** Abdel Hameed Shoman Foundation International Award for Young Arab Researchers in Biological and Environmental Sciences http://www.shoman.org/en/research-and-awards**, Jordon**.
- **Reda A.I. Abou-Shanab (2010)**, State award for advanced sciences and technology, which serves the areas of basic science, Ministry of higher education and scientific research, Egypt.
- **Abou-Shanab, R.A.I. (2010).** Award certificate in World water day 2010, clean water for a healthy world, 4th Egyptian world water festival, 20-22 March, 2010, Arab Environmenta Association, Alexandria, Egypt.
- **Postdoctoral position** at Yonsei University, Environmental Engineering Dept., Wonju, S. Korea start from April, 1st 2009-March, **2010**.
- **Excellent Research achievement** (Highest Impact Factor) award for year **20092010**, Mubarak City for Scientific Research and Technology Applications, Alexandria, Egypt.

	• **Best article award** in the Korean Society for new and renewable energy conference, Conference Hall of Jeollabuk-do, November 25-27, **2009, S. Korea.** • **Excellent Research achievement** award for year **2008-2009**, Mubarak City for Scientific Research and Technology Applications, Alexandria, Egypt. • **Abou-Shanab** was selected from 100 top Scientists in the world, **2008**, UK • **Abou-Shanab et al**., **(2007)** article "Heavy metal resistant patterns and further genotypic characterization of metal resistant gene (S) in Gram positive and Gram negative bacteria isolated from Ni-rich serpentine soil and the rhizosphere of *Alyssum murale* published in chemosphere journal was selected among the 25 top articles in Science Direct, **2007**. • **Abou-Shanab** was listed in Who's Who in the World Book, USA, **2007**. • **Exchange Scientist award** from US-Egypt Science & Technology Joint Fund Program, Funded from united state Dept., of Agriculture (USDA) for six months, University of Maryland, USA. **(2005).**
LIST OF PUBLICATIONS	1 **Abou-Shanab, R.A.I**., Mathai, P.P., Santelli, C., Sadowsky, M.J. (2020). Indigenous soil bacteria and the hyperaccumulator *Pteris vittata* mediate phytoremediation of soil contaminated with arsenic species. Ecotoxicology and Environmental Safety 195:110458. 2 Marwa M. El-Dalatony, Shouvik Saha, Sanjay P. Govindwar, **Reda A.I. Abou-Shanab**, Byong-Hun Jeon **(2019).** Biological conversion of amino acids to higher alcohols. **Trends in Biotechnology**, 37:855-869. 3 Basma Omar, Maie El-Gammal, **Reda Abou-Shanab**, Yifeng Zhang, Ioannis A. Fotidis, Irini Angelidaki (**2019**). Biogas upgrading and biochemical production from gas fermentation: impact of microbial community and gas composition. **Bioresource Technology**, V:286, 121413; https://doi.org/10.1016/j.biortech.2019.121413 4 El-Sayed Salama, Hyun-Seog Roh, Subhabrata Dev, Moonis Ali Khan, **Reda A. I. Abou-Shanab**, Soon Woong Chang, Byong-Hun Jeon **(2019).** Algae as a green technology for heavy metals removal from various wastewater. **World Journal of Microbiology and Biotechnology** 35:5: 75 5 Jiu-QiangXiong, Sun-JoonKim, Mayur B.Kurade, SanjayGovindwar, **Reda A.I.Abou-Shanab,** Jung-RaeKim, Hyun-SeogRoh, Moonis Ali Khan,

	Byong-HunJeon (**2019**). Combined effects of sulfamethazine and sulfamethoxazole on a freshwater microalga, *Scenedesmus obliquus*: toxicity, biodegradation, and metabolic fate, **Journal of Hazardous Materials,** 370:138-146.
	6 **R.A.I. Abou-Shanab**, M. Wongphatcharachai, C. C. Sheaffer, and M. J. Sadowsky (**2019**). Response of Dry Beans to Inoculation with Indigenous and Commercial *Rhizobium* Strains under Organic Farming Systems in Minnesota, **Symbiosis**, 78:125-134.
	7 Basma Omar, **Reda Abou-Shanab**, Maie El-Gammal, Ioannis A.Fotidis, Panagiotis G. Kougias, Yifeng Zhang, Irini Angelidaki **(2018)**. Simultaneous biogas upgrading and biochemicals production using anaerobic bacterial mixed cultures. **Water Research** 142: 86-95.
	8 **El-sayed salama, Jae-hoonhwang, marwa m.el-dalatony, mayur b. kurade, akhil n.kabra,** reda a.i.abou-shanab**, ki-hyunkim, il-seung yang, sanjay p. govindwar, sunjoon kim, byong-hunjeon** (2018)**. enhancement of microalgal growth and biocomponent-based transformations for improved biofuel recovery: a review.** bioresource technology **258:365-375.**
	9 Brendan Epstein, **Reda A. I. Abou-Shanab**, Abdelaal Shamseldin, Margaret R. Taylor, Joseph Guhlin, Liana T. Burghardt, Matthew Nelson, Michael J. Sadowsky, Peter Tiffin (**2018**). Genome-wide association analyses in the model rhizobium *Ensifer meliloti,* MSPHERE**, SEPTEMBER/OCTOBER 2018 VOLUME 3 ISSUE 5 E00386-18.**
	10 nagah m. a. hassanin, o. m. awad, s. a. el-fiki, r.a.i. abou-shanab, a.r. abou-shanab, r.a. amer (2018). association between exposure to pesticides and disorder on hematological parameters and kidney function in male agricultural workers. *environmental science and pollution research*, 25(31):30802-30807.
	11 **Reda A. I. Abou-Shanab**, Manoosak Wongphatcharachai, Craig C. Sheaffer, James C. Orf, Michael J. Sadowsky **(2017).** Competition between introduced *Brady-rhizobium japonicum* strains and indigenous bradyrhizobia in Minnesota organic farming systems. Symbiosis 73(3): 155-163.
	12 El-Sheekh M.M., Abomohra A., Abd El-Azim M., **Abou-Shanab, R (2017)**. Effect of temperature on growth and fatty acids profile of the biodiesel promising microalga *Scenedesmus acutus.* ***Biotechnologie, Agronomie, Société et Environnement*** 21(4): 233-239.

13 **MAIE EL-GAMMAL,** REDA ABOU-SHANAB**, IRINI ANGELIDAKI, BASMA OMAR, PER VIKTO RSVEDING, DIMITAR BORISOV KARAKASHEV, YIFENG ZHANG** (2017). **HIGH EFFICIENT ETHANOL AND VFA PRODUCTION FROM GAS FERMENTATION: EFFECT OF ACETATE, GAS AND INOCULUM MICROBIAL COMPOSITION.** BIOMASS AND BIOENERGY **105:32-40.**

14 El-Sayed Salama, Mayur B. Kurade, **Reda A.I. Abou-Shanab**, Marwa M. El-Dalatony, Il-Seung Yang, Booki Min, Byong-Hun Jeon **(2017).** Recent progress in microalgal biomass production coupled with wastewater treatment for biofuel generation. ***Renewable and Sustainable Energy Reviews*** 79:1189-1211.

15 Mahmoud M. Mubarak, **Reda A.I. Abou-Shanab**, Amel A. Tammam, Weam H. El-Aggan **(2017).** Phytoremediation potential of wild plants collected from heavy metals contaminated soils. **Int. J. Geology, Agricul. & Environ. Sci**. 5(4) 15-19.

16 **Reda A. I. Abou-Shanab**, Mohamed Eraky, Ahmed M. Haddad, Abdel-Rahman B. Abdel-Gaffar, and Ahmed M. Salem (**2016**). Characterization of Crude Oil Degrading Bacteria Isolated from Contaminated Soils Surrounding Gas Stations. ***Bulletin Environmental Contamination and Toxicology*** 97:684-688.

17 Marwa M. El-Dalatony, Mayur B. Kurade, **Reda A.I. Abou-Shanab**, Hoo Kim, El-Sayed Salama, Byong-Hun Jeon (**2016**). Long-term production of bioethanol in repeated-batch fermentation of microalgal biomass using immobilized Saccharomyces cerevisiae. ***Bioresource Technology*** *(219): 98-105.*

18 **Reda A.I. Abou-Shanab**, Manjinder Singh, Anagelica Rivera Cruz, Grace Power, Thomas Bagby-Moon, Keshav Das (**2016**). Effect of *Brachionus rubens* on the growth characteristics of various species of microalgae. ***Electronic Journal of Biotechnology*** 22:68-74.

19 Jiu-Qiang Xiong, mayor B. Kurade, **Reda A.I. Abou-Shanab**, Min-Kyu Ji, Jaeyoung Choi, Jong Oh Kim, Byong-Hun Jeon (**2016**). Biodegradation of carbamazepine using freshwater microalgae *Chlamydomonas Mexicana* and *Scenedesmus obliquus* and the determination of its metabolic fate. **Bioresource Technology** 205:183-190.

20 El-Sayed Salama, Bayong-Hun Jeon, Mayur B. Kurade, **Reda A.I.Abou-Shanab**, Sanjay P. Govindwar, Sang-hun Lee, II-Seung Yang, Dae Sung Lee (**2016**). Harvesting of freshwater microalgae *Scenedesmus obliquus* and *Chlorella vulgaris* using acid mine drainage as a cost effective flocculant for biofuel production. **Energy Conversion and Management**. 121:105-112.

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University center for Executive leadership in Gov, USA, from the 27th of June to the 1st July, 2010.

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